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January 24, 2005

ADVICE LETTER 1656-E
(U 902-E)

PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

**SUBJECT: REVISION TO GENERATING FACILITY INTERCONNECTION APPLICATION
(FORM 142-05203)**

San Diego Gas & Electric Company (SDG&E) hereby transmits for filing the following revision to its electric tariffs, as shown in the enclosed Attachment.

PURPOSE

The purpose of this Advice Letter is to revise SDG&E's Generating Facility Interconnection Application (Form No. 142-05203) in order to incorporate the changes that have been developed by the Rule 21 working group.

BACKGROUND

On August 18, 2004, SDG&E filed Advice Letter 1616-E to revise its Rule 21, Interconnection Standards for Non-Utility Owned Generation, in order to 1) make text and formatting content changes consistent with the requirements of the American National Standards Institute and Institute of Electrical and Electronic Engineers Standard for Interconnecting Distributed Resources with Electric Power Systems (ANSI/IEEE 1547-2003) and 2) create a uniform Rule 21 for SDG&E, Southern California Edison Company and Pacific Gas and Electric Company (utilities).

This Advice Letter modifies SDG&E's Generating Facility Interconnection Application to correspond with the revisions made to Rule 21 by Advice Letter 1616-E approved by the California Public Utilities Commission's Energy Division on December 3, 2004.

No cost information is required for this Advice Letter.

This filing will not increase any rate or charge, cause withdrawal of service, or conflict with any other schedule or rule.

EFFECTIVE DATE

SDG&E respectfully requests that this filing become effective on March 5, 2005, which is 40 calendar days after the date filed.

PROTEST

Anyone may protest this Advice Letter to the Commission. The protest must state the grounds upon which it is based, including such items as financial and service impact, and should be submitted expeditiously. The protest must be made in writing and must be received within 20 days of the date

this Advice Letter was filed with the Commission. There is no restriction on who may file a protest. The address for mailing or delivering a protest to the Commission is:

IMC Branch Chief
Energy Division
California Public Utilities Commission
505 Van Ness Avenue, 4th Floor
San Francisco, CA 94102

Copies of the protest should also be sent via e-mail to the attention of both Jerry Royer (jrr@cpuc.ca.gov) and to Honesto Gatchalian (jnj@cpuc.ca.gov) of the Energy Division. A copy of the protest should also be sent via both e-mail and facsimile to the address shown below on the same date it is mailed or delivered to the Commission.

Attn: Monica Wiggins
Regulatory Tariff Manager
8330 Century Park Court, Room 32C
San Diego, CA 92123-1548
Facsimile No. (858) 654-1788
E-mail: MWiggins@SempraUtilities.com

NOTICE

In accordance with Section III-G of General Order 96-A, a copy of this filing has been served on the utilities and interested parties shown on the attached list by providing them a copy hereof either electronically or via the U.S. mail, properly stamped and addressed.

Address changes should be directed to Christina Sondrini by facsimile at (858) 654-1788 or by e-mail at CSondrini@SempraUtilities.com.

J. STEVE RAHON
Director – Tariffs & Regulatory Accounts

General Order No. 96-A, Sec. III. G.
ADVICE LETTER FILING MAILING LIST

cc: (w/enclosures)

PUBLIC UTILITIES COMMISSION

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ORA

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W. Gibson
J. Grieg
L. Maack
D. Morse
M. Pocta
W. Scott

Energy Division

F. Fua
D. Lafrenz

CA. ENERGY COMMISSION

Gail Budin-Gordon
F. DeLeon
R. Tavares
B. Wood

Advantage Energy, LLC (U.S. MAIL)

Alcantar & Kahl

AMDAX

American Energy Institute

Anza Electric Cooperative

Arter & Hadden LLP

BP Energy Company

Barkovich & Yap, Inc.

Bartle Wells Associates

BENTEK Energy Technologies

Burlington Resources

California Farm Bureau Federation

Calpine

CCTA

Children's Hospital & Health Center

City of Poway

City of San Diego

Jose Cervantes

Gerard Lonergan

Commonwealth Energy Corp

M. Reyna

J. Shultz

Crossborder Services

CSC Energy Services

R. McKillip

T. Rodriguez

C. Tammaro

Davis Wright Tremaine, LLP

E. O'Neill

J. Pau

Dept. of General Services

Dept. of Vet. Affairs Med. Ctr.

Duke Energy North America

Dynegy, Inc.

Eisenman, Eric

Ellison Schneider & Harris LLP

Energy Law Group LLP

D. Fellman

Energy Solutions

Energy Strategies, Inc.

Enron Capital & Trade (2)

G.A. Koteen Associates, Inc

G.E. Goodrich Co

Goodin, MacBride, Squeri, Ritchie & Day

B. Cragg

J. Heather Patrick

J. Squeri

Green Mountain.Com Company

Grueneich Resource Advocates

Dian M. Grueneich

Jack P. McGowan

Hanna and Morton LLP

Henwood Energy Services

C. Castagnoli

HMH Resources, Inc.

Interstate Gas Services, Inc.

J.B.S. Energy

Kyocera America Inc

LeBoeuf, Lamb, Greene & MacRael

LSW Engineers, California Inc.

J. Mascarro

B. Mahoney

Luce, Forward, Hamilton & Scripps LLP

ManageAmerica

Manatt, Phelps & Phillips

Matthew V. Brady & Associates

Modesto Irrigation District

Morrison & Foerster

MRW & Associates

Naval Facilities Eng. Command

NCR Corp

New Energy, Inc, An AES Company

O'Rourke & Company

Pacific Gas & Electric Co.

N. Avendano

W. Edwards

Pacific Utility Audit

Poway Unified School District

R. M. Hairston Company

Recon Research Corp

Robinsons-May Dept. Stores

Rohr, Inc.

San Diego Regional Energy Office

Susan Freedman

Scott J. Anders

School Project for Utility Rate

Reduction

Scott, Addis

Scripps Health

Shute, Mihaly & Weinberger LLP

K. Johanson

J. Schue

O. Armi

Sithe Energies

Solar Turbines

Sutherland, Asbill & Brennan LLP

Southern California Edison Co.

H. Romero

C. Roskopf

S. Smith

TURN, Michel Florio

UCAN, Michael Shames

U.S. Dept. of the Navy

K. Davoodi

N. Furuta

UtiliHost/Electric America

Utility Cost Management LLC

Utility Solutions Inc.

B. Dotson

T. Rodriguez

Utility Specialists, Southwest, Inc.

Vulcan Materials - CalMat Div.

Viterra Energy Services

Western Manufactured Housing

Communities Association

White & Case LLP

L. Cottle

P. Lacourciere

ATTACHMENT
ADVICE LETTER 1656-E

Cal. P.U.C. Sheet No.	Title of Sheet	Canceling Cal. P.U.C. Sheet No.
Revised 17729-E	SAMPLE FORMS, FORM 142-05203, Sheet 1	Original 14698-E
Revised 17730-E	TABLE OF CONTENTS, Sheet 1	Revised 17717-E
Revised 17731-E	TABLE OF CONTENTS, Sheet 8	Revised 17157-E



San Diego Gas & Electric Company
San Diego, California

Revised	Cal. P.U.C. Sheet No.	17729-E
Canceling	Original	Cal. P.U.C. Sheet No. 14698-E

SAMPLE FORMS

Sheet 1

FORM 142-05203

GENERATING FACILITY
INTERCONNECTION APPLICATION

(01/05)

(See Attached Form)

T

1P13

Advice Ltr. No. 1656-E

Decision No. _____

Issued by
Lee Schavrien
Vice President
Regulatory Affairs

Date Filed Jan 24, 2005

Effective _____

Resolution No. _____

Part 1 – Introduction and Overview

- A. Applicability:** This Generating Facility Interconnection Application (Application) is used to request the interconnection of a Generating Facility to San Diego Gas and Electric Company's (SDG&E) Distribution System (over which the California Public Utilities Commission (CPUC) has jurisdiction). Refer to SDG&E's Rule 21 to determine the specific requirements for interconnecting a Generating Facility. Capitalized terms used in this Application, and not otherwise defined herein, shall have the same meanings as defined in SDG&E's Rule 21 and Rule 1.

Except as noted in the next paragraph, this Application may be used for any Generating Facility to be operated by, or for, a Customer and/or Producer to serve part or all of its electric energy requirements that would otherwise be provided by SDG&E, including "distributed generation", "cogeneration," emergency, backup, and standby generation, and Net Energy Metered Generating Facilities. A simpler, shorter form is also available from SDG&E for Net Energy Metered Generating Facilities with a nameplate rating less than 10kW. While Customers operating Generating Facilities isolated from SDG&E's Distribution System are not obligated to enter into an Interconnection Agreement with SDG&E, parts of this Application will need to be completed to satisfy SDG&E's notice requirements for operating an isolated Generating Facility.

This Application may not be used to apply for interconnecting Generating Facilities used to participate in transactions where all, or a portion of, the electrical output of the Generating Facility is scheduled with the California Independent System Operator. Such transactions are subject to the jurisdiction of the Federal Energy Regulatory Commission (FERC) and require a different application available from SDG&E.

- B. Guidelines and Steps for Interconnection:** This Application must be completed and sent to SDG&E along with the additional information indicated in Part 1, Section C below to initiate SDG&E's interconnection review of the proposed Generating Facility. An Initial Review fee of \$800 (payable by check or money order to _____) must accompany all Applications except those Applications for isolated Generating Facilities, Solar and Net Energy Metering Generating Facilities. The \$800 Initial Review fee must be submitted separately from the Application. The check or money order must be submitted with SDG&E's "Customer Payment Remittance" (CPR) form. A copy of the CPR form may be requested by contacting: _____. Supplemental Review and Interconnection Study fees may be required for large capacity and/or more complex Generating Facility Interconnections; see SDG&E's Rule 21, Section C.1.b. & c. Please refer to the California Energy Commission's website: http://www.energy.ca.gov/distgen/interconnection/guide_book.html for more information regarding interconnection of a generator to SDG&E's Distribution System.

This document is only an Application. Upon acceptance, SDG&E will prepare an Interconnection Agreement for execution by the "Producer," the party that will be responsible for the Generating Facility. SDG&E may also require an inspection and testing of the Generating Facility and any related Interconnection Facilities prior to giving the Producer written authorization to operate in parallel. **Unauthorized Parallel Operation may be dangerous and may result in injury to persons and/or may cause damage to equipment and/or property for which a Producer/Customer may be liable!**

Please note, other approvals may need to be acquired, and/or other agreements may need to be formed with SDG&E or regulatory agencies, such as the Air Quality Management Districts and local governmental building and planning commissions prior to operating a Generating Facility. SDG&E's authorization to operate in parallel does not satisfy the need for an Applicant to acquire such other approvals.

- C. Required Documents:** _____ copies of this Application and each of the following documents **must be submitted** before this application will be processed. Drawings must conform to accepted engineering standards and must be legible. 11"x17" drawings are preferred.
1. A **Single-line drawing** showing the electrical relationship and descriptions of the significant electrical components such as the primary switchgear, secondary switchboard, protective relays, transformers, generators, circuit breakers, with operating voltages, capacities, and protective functions of the Generating Facility, the Customer's loads, and the interconnection with SDG&E's Distribution System. Please show the location of all required net generation electric output meters and the A.C. manually operated disconnect devices on the single line drawing.
 2. **Site plans and diagrams** showing the physical relationship of the significant electrical components of the Generating Facility such as generators, transformers, primary switchgear/secondary switchboard, and control panels, the Customer's loads and the interconnection with SDG&E's Distribution System. Please show the location of all required net generation electric output meters and the A.C. manually operated disconnect devices on the site plans.
 3. If **transformers** are used to interconnect the Generating Facility with SDG&E's Distribution System, please provide transformer nameplate information (voltages, capacity, winding arrangements, connections, impedance, et cetera).
 4. If a **transfer switch** or scheme is used to interconnect the Generating Facility with SDG&E Distribution System, please provide component descriptions, capacity ratings, and a technical description of how the transfer scheme is intended to operate.
 5. If **protective relays** are used to control the interconnection, provide protection diagrams or elementary drawings showing relay wiring and connections, proposed relay settings, and a description of how the protection scheme is intended to function.
 6. An Initial Review fee check or money order in the amount of \$ 800, if applicable, made out to _____, referencing the electric account number (Part 2. A.) and "Initial Interconnection Review Fee" **[NOTE: C.6. not applicable to SDG&E]**



GENERATING FACILITY INTERCONNECTION APPLICATION

Part 1 Cont'd – Introduction and Overview

D. Mailing Instructions, Assistance: When this application has been completed it may be printed and mailed, along with the required attachments to:

SDG&E
Attention: _____

Alternatively, you may contact SDG&E at (_____) or _____ and make arrangements to e-mail or fax copies of the required information with payment of the required fees to follow. If you have questions or need assistance in completing this application please call.



GENERATING FACILITY INTERCONNECTION APPLICATION

Part 2 – Identifying the Generating Facility's Location and Responsible Parties

<i>Project Name:</i>	<i>Date Received:</i>	<i>Generating Facility ID:</i>	<i>Application Expiration Date (Refer to Part 2, Section E)</i>

(For SDG&E Use Only)

A. Customer Electric Account Information (What electric service will the Generating Facility be connected? For aggregated electric accounts (under NEM-BIO, dairy operations only) provide the primary and all associated accounts/meter information)

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Name shown on SDG&E service account

Electric Account Number

Meter Number

NOTE: Customer Electric account must match the customer's utility bill account information.

--	--	--	--

Meter Location Street Address

City

State

Zip

Customer Electric Account Contact Information (Who is the customer contact for progress updates and/or additional information?)

--	--

Contact Person

Company Name

--	--	--

Phone

Fax

E-mail

--	--	--	--

Mailing Address

City

State

Zip

B. Project Contact Information (Who is the project contact for this Generating Facility?)

--	--

Project Contact Person (Optional)

Company Name

--	--	--

Phone

Fax

E-mail

--	--	--	--

Mailing Address

City

State

Zip

B.1. Will the Generating Facility be owned by a (third) party other than the name appearing on the SDG&E service account in A. above (please check)? ____ Yes ____ No



GENERATING FACILITY INTERCONNECTION APPLICATION

Part 2 Cont'd – Identifying the Generating Facility's Location and Responsible Parties

C. 1. Customer - Generation Facility Interconnection Agreement ("GFIA") or Customer Generation Agreement ("CGA") (applicable to 3rd Party Owner Only) Information (Please identify, if known, the party that will execute the applicable agreement. Not applicable for Net Energy Metering Applicants.)

Person Executing the GFIA/CGA	Title of Person Executing GFIA/CGA

Name of Legal Entity to be entered in signatures section of the GFIA/CGA

C.2. 3rd Party Owner – GFIA Information (Please identify the Party, if known, that will execute the GFIA). Not applicable for Net Energy Metering Applicants.

Person Executing the GFIA	Title of Person Executing GFIA

Name of Legal Entity to be entered in signatures section of the GFIA

D. Operating Date (What date is this Generating Facility expected to begin operation?)

--

E. Expiration Date* (The date the status of this Application is changed to "withdrawn" by SDG&E?)

--

* The information submitted in this Application will remain active and valid for a period of 12 months from the date the Application was accepted by SDG&E as a "completed" Application. If the project has not received written authorization to operate in parallel, or that reasonable proof the project is going forward has not been submitted to SDG&E by that time, the Application will be considered "withdrawn". To the extent that the Initial Review, Supplemental Review, or Detailed Interconnection Study fees have been paid to and the corresponding reviews/study completed by SDG&E, Applicant will only be entitled to a return of one-half of the Initial Review fee of \$400. All other fees will be forfeited.



GENERATING FACILITY INTERCONNECTION APPLICATION

Part 3 - Describing the Generating Facility and Host Customer's Electrical Facilities

A. (MP&I)	Indicate the operating mode of the Generating Facility	operating mode options: __1 __2 __3 (Choose one)
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Instructions and Notes

Choose from the following operating mode options:

1. **Parallel Operation:** The Generating Facility will interconnect and operate "in parallel" with SDG&E's Distribution System for more than one (1) second.
2. **Momentary Parallel Operation (MP):** The Generating Facility will interconnect and operate on a "momentary parallel" basis with SDG&E's Distribution System for a duration of one (1) second or less through transfer switches or operating schemes specifically designed and engineered for such operation.
3. **Isolated Operation (I):** The Generating Facility will be "isolated" and prevented from becoming interconnected with SDG&E's Distribution System through a transfer switch or operating scheme specifically designed and engineered for such operation.

If the answer is operating mode option 1, "parallel operation," please supply all of the information requested for the Generating Facility. Be sure to supply adequate information including diagrams and written descriptions regarding the protective relays that will be used to detect faults or abnormal operating conditions on SDG&E's Distribution System.

If the answer is operating mode option 2, "momentary parallel operation," only questions A, E and F of this Part 3 and questions A, B, E, F, I, L, M, N, and S of Part 4 need be answered. Be sure, however, to supply adequate information including diagrams and written descriptions regarding the switching device or scheme that will be used to limit the parallel operation period to one second or less. Please also describe the back up or protective device and controls that will trip the Generating Facility should the transfer switch or scheme not complete the transfer in one second or less.

If the answer is operating mode option 3, "Isolated Operation," only questions A, E, and F of this Part 3 and questions A, B, F, and S of Part 4 need be answered. Be sure, however, to supply adequate information including diagrams and written descriptions regarding the isolating switching device or scheme that will be used to prevent the Generating Facility from operating in parallel with SDG&E's Distribution System.

B. <i>Parallel Operation Applications Only</i>	<p>If the Answer to Section A above was operating mode option 1, please indicate the type of agreement that is being requested with this Application. If operating mode option 2 or 3 was selected, please skip to questions E and F.</p> <p>If agreement options 2, 3, 5, 6, 8, 9 or 10 to this Section B are chosen, please provide an estimate of the maximum kW the Generating Facility is expected to export to SDG&E's Distribution System. If SDG&E determines that the amount of power to be exported is significant in relation to the capacity available on its Distribution System, it may request additional information, including time of delivery or seasonal kW/kWh estimates.</p>	agreement options: __1 __2 __3 __4 __5 __6 __7 __8 __9 __10 (Choose all that apply) _____ Maximum kW
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Instructions and Notes

Sample agreements are available from SDG&E for review. Choose from the following ten (10) agreement options:

Customer Owned Generating Facility

1. **A Generating Facility Interconnection Agreement** that provides for parallel operation of the Generating Facility, but does not provide for exporting power to SDG&E's Distribution System.
2. **A Generating Facility Interconnection Agreement (Inadvertent Export)** that provides for parallel operation of the Generating Facility, and the occasional, inadvertent, non-compensated, export of power to SDG&E's Distribution System
3. **A "Qualifying Facility" Power Purchase Agreement** that provides for parallel operation of the Generating Facility, and exporting power to SDG&E's Distribution System for sale to SDG&E. This option is available only to "Qualifying Facilities" with a total Nameplate Capacity of 100 kW or less. See Question F for the definition of a Qualifying Facility. (This type of agreement has not yet been developed by SDG&E or approved by the CPUC. Check with SDG&E for availability).

Part 3 Cont'd - Describing the Generating Facility and Host Customer's Electrical Facilities

Third Party Owned Generating Facility

4. **A Generating Facility Interconnection Agreement** that provides for parallel operation of the third party owned Generating Facility, but does not provide for exporting power to SDG&E's Distribution System.
5. **A Generating Facility Interconnection Inadvertent Export Agreement** that provides for parallel operation of the third party owned Generating Facility and the occasional, inadvertent, non-compensated, export of power to SDG&E's Distribution System.
6. **A "Qualifying Facility" Power Purchase Agreement** that provides for parallel operation of the third party owned Generating Facility, and exporting power to SDG&E's Distribution System for sale to SDG&E. This option is available only to "Qualifying Facilities" with a total Nameplate Capacity of 100 kW or less. See Question F for the definition of a Qualifying Facility.
7. **A Customer Generation Agreement** that defines the relationship between the Customer whose name appears on SDG&E's electric service account (this agreement must be executed in addition to 4. 5. or 6.)

Net Energy Metering Generating Facility

8. **A Net Energy Metering Agreement** that provides for parallel operation of the Generating Facility, and exporting power to SDG&E's Distribution System for credit under the terms of SDG&E's Net Energy Metering tariffs. This option is available only to eligible generating facilities as defined in SDG&E's Net Energy Metering tariffs. (An interconnection agreement for a Generating Facility consisting of two generators eligible for two different Net Energy Metering tariffs has not yet been developed. Check with SDG&E for availability).
9. **A Net Energy Metering /Non- Net Energy Metering eligible Generating Facility Agreement** that provides for the parallel operation of the Generating Facility that utilizes generators eligible for service under NEM or other applicable Net Energy Metering tariffs that are electrically connected behind the same Point of Common Coupling with generators not eligible to receive service under the NEM tariff. (This type of agreement has not yet been developed by SDG&E or approved by the CPUC. Check with SDG&E for availability).
10. **Other, please describe:** _____

C. <i>Parallel Operation Applications Only</i>	<p>If the answer to Section B above was agreement option 1 or 4, please indicate the protection option that will be used to prevent energy from being exported to SDG&E's Distribution System.</p> <p>If protection option 3 to this Section C is selected, please provide the continuous current rating of the host Customer facility's service entrance equipment (service panel rating):</p> <p>If protection option 4 to this Section C is selected, please provide the minimum load of the host Customer facility:</p>	<p>protection option:</p> <p>___1___2___3___4 (Choose one)</p> <p>_____</p> <p style="text-align: center;">Amps</p> <p>_____</p> <p style="text-align: center;">kW</p>
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Instructions and Notes

Refer to SDG&E's Rule 21, Section I.2., for additional information as to how to answer this question. If the Generating Facility will never export power to SDG&E's Distribution System, a simpler, lower cost, protection scheme may be used to control the interface between the Generating Facility and SDG&E's Distribution System. Choose from the following four options:

1. A reverse-power protection device will be installed to measure any export of power and trip the Generating Facility or open an intertie breaker to isolate the Generating Facility if limits are exceeded.
2. An under-power protection device will be installed to measure the inflow of power and trip or reduce the output of the Generating Facility if limits are not maintained.
3. The Generating Facility Interconnection Facility equipment has been certified as Non-Islanding and the incidental export of power will be limited by the design of the interconnection. If this option is to be used, the continuous ampere rating of the service entrance equipment (service panel rating) that is used by the host Customer facility must be stated in the space provided above.
4. The Gross Nameplate Rating of the Generating Facility will not exceed 50% of the host Customer facility's minimum electrical load. If this option is to be used, the minimum load of the host Customer facility must be stated in the space provided above.

Note: With the approval of SDG&E, a Producer that wishes to retain the option to export power from a Generating Facility to SDG&E's Distribution System may use a different protection scheme that provides for the detection of faults and other abnormal operating conditions.

Part 3 Cont'd - Describing the Generating Facility and Host Customer's Electrical Facilities

D.

*Parallel
Operation
Applications
Only*

What is the maximum 3-phase fault current that will be contributed by the Generating Facility to a 3-phase fault at the Point of Common Coupling (PCC)? (If the Generating Facility is single phase in design, please provide the contribution for a line-to-line fault.)

_____ Amps

Please indicate the short circuit interrupting rating of the host Customer facility's service panel:

_____ Amps

Instructions and Notes

Refer to SDG&E's Rule 21 Sections D.4.a. and I.3.g. for significance and additional information. To determine this value, any transformers and/or significant lengths of interconnecting conductor used between each of the Generators (if there are more than one) that make up the Generating Facility and the PCC must be taken into account. The details, impedance, and arrangement of such transformers and interconnecting conductors should be shown on the single-line diagram that is provided. Consult an electrical engineer or the equipment supplier if assistance is needed in answering this question.

It is expected that most Applicants will want to reserve the flexibility to operate any or all of their Generators in parallel. If the design of the proposed Generating Facility limits the amount of generation that may be interconnected at any time to SDG&E's Distribution System, please describe the assumptions used in calculating the maximum fault current contribution value.

E.
(MP&I)

Please indicate how this Generating Facility will be operated.

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5
(Please choose all options that may apply.)

Instructions and Notes

Choose from the following five operation options:

- Combined Heat and Power or Cogeneration** – Where the operation of the Generating Facility will produce thermal energy for a process other than generating electricity.
- Peak Shaving/Demand Management** – Where the Generating Facility will be operated primarily to reduce electrical demands of the host Customer facility during SDG&E's "peak pricing periods".
- Primary Power Source** – Where the Generating Facility will be used as the primary source of electric power and power supplied by SDG&E to the host Customer's loads will be required for supplemental, standby, or backup power purposes only.
- Standby / Emergency / Backup** – Where the Generating Facility will normally be operated only when SDG&E's electric service is not available.
- Net Energy Metering** – Where the Generating Facility qualifies and receives service under SDG&E's Net Energy Metering tariffs.

F.
(MP&I)

Please indicate if Qualifying Facility Status will be obtained from the FERC for this Generating Facility.

☐ Yes

☐ No

Instructions and Notes

Parties operating Generating Facilities complying with all of the requirements for qualification as either a small power production facility or cogeneration facility pursuant to the regulations of the FERC (18 Code of Federal Regulations Part 292, Section 292.203 et seq.) implementing the Public Utility Regulatory Policies Act of 1978 (16 U.S.C.A. Section 796, et seq.), or any successor requirements for "Qualifying Facilities," may seek certification from FERC to have the Generating Facility designated as a Qualifying Facility or "QF." In summary, QF's are Generating Facilities using renewable or alternative fuels as a primary energy source or facilities that utilize the thermal energy given off by the generation process for some other useful purpose. QF's enjoy certain rights and privileges not available to non-QF Generating Facilities.

QF status is not required to interconnect and operate in parallel with SDG&E's Distribution System.

G.

Please indicate if Generating Facility will meet the annual Efficiency and Operating Standards of PUC Code 218.5(Applicable to Cogeneration Only)

☐ Yes

☐ No

☐ N/A

GENERATING FACILITY INTERCONNECTION APPLICATION

Part 4 – Describe each of the Generators (See Instructions.) Use additional sheets, if necessary.

	Generator Information	Generator Type 1	Generator Type 2	Generator Type 3	Totals For All Generators
#	Please indicate the number of each "type" of Generator being installed: (See instructions)				
A (MP&I)	Generator/Inverter Manufacturer (Name)				
B (MP&I)	Generator/Inverter Model (Name/Number)				
C	Generator/Inverter Software Version (Number)				
D	Is the Generator Certified by a Nationally Recognized Testing Laboratory (NRTL) according to Rule 21?	__Yes __No	__Yes __No	__Yes __No	
E (MP)	Generator Design (Choose One)	__Synchronous __Induction __Inverter	__Synchronous __Induction __Inverter	__Synchronous __Induction __Inverter	
F (MP&I)	Gross Nameplate Rating (kVA)				
G	Gross Nameplate Rating (kW)				
H	Net Nameplate Rating (kW)				
I (MP)	Operating Voltage (Volts or kV)				
J	Power Factor Rating (%)				
K	PF Adjustment Range (%)	Min. _____ Max. _____	Min. _____ Max. _____	Min. _____ Max. _____	
L (MP)	Wiring Configuration (Choose One)	__Single-Phase __Three-Phase	__Single-Phase __Three-Phase	__Single-Phase __Three-Phase	

Part 4 Cont'd – Describe each of the Generators (See instructions) Use additional sheets if necessary

	Generator Information	Type 1	Type 2	Type 3
M (MP)	3-Phase Winding Configuration (Choose One)	__ 3 Wire Delta __ 3 Wire Wye __ 4 Wire Wye	__ 3 Wire Delta __ 3 Wire Wye __ 4 Wire Wye	__ 3 Wire Delta __ 3 Wire Wye __ 4 Wire Wye
N (MP)	Neutral Grounding System Used (Choose One)	__ Ungrounded __ Solidly Grounded __ Ground Resistor _____ Ohms	__ Ungrounded __ Solidly Grounded __ Ground Resistor _____ Ohms	__ Ungrounded __ Solidly Grounded __ Ground Resistor _____ Ohms
O	<i>For Synchronous Generators Only:</i> Synchronous Reactance: Transient Reactance: Subtransient Reactance:	_____ (Xd %) _____ (X'd %) _____ (X''d %)	_____ (Xd %) _____ (X'd %) _____ (X''d %)	_____ (Xd %) _____ (X'd %) _____ (X''d %)
P	<i>For Induction Generators Only:</i> Locked Rotor Current: OR Stator Resistance: Stator Leakage Reactance: Rotor Resistance: Rotor Leakage Reactance:	_____ (Amps) _____ (%) _____ (%) _____ (%) _____ (%)	_____ (Amps) _____ (%) _____ (%) _____ (%) _____ (%)	_____ (Amps) _____ (%) _____ (%) _____ (%) _____ (%)
Q	Short Circuit Current Produced by Generator:	_____ (Amps)	_____ (Amps)	_____ (Amps)
R	<i>For Generators that are Started as a "Motor" Only</i> 1. In-Rush Current: 2. Host Customer's Service Entrance Panel (Main Panel) Continuous Current Rating:	_____ (Amps) _____ (Amps)	_____ (Amps) _____ (Amps)	_____ (Amps) _____ (Amps)
S (MP&I)	Prime Mover Type: (Circle One)	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

GENERATING FACILITY INTERCONNECTION APPLICATION

Instructions for Part 4 – Describing the Generators

		Generator Information	Instructions and Comments
#		Please indicate the number of each “type” of Generator being installed:	Please provide the following information for each Generator “type”. Be sure all Generators classified as one “type” are identical in all respects. If only one type of Generator is to be used, only one column needs to be completed. Please be sure the information in the “Totals” column is correct and reflects the total number of Generator units to be installed.
A		Generator/Inverter Manufacturer	Enter the brand name of the Generator.
B		Generator/Inverter Model	Enter the model name or number assigned by the manufacturer of the Generator.
C		Generator/Inverter Software Version	If this Generator’s control and or protective functions are dependent on a “software” program supplied by the manufacturer of the equipment, please provide the version or release number for the software that will be used.
D		Is the Generator Certified by a Nationally Recognized Testing Laboratory (NRTL) according to Rule 21?	Answer “Yes” only if the Generator manufacturer can or has provided certification data. See SDG&E’s Rule 21, Section J for additional information regarding Generator certification.
E		Generator Design	Please indicate the design of each Generator. Designate “Inverter” anytime an inverter is used as the interface between the Generator and the electric system regardless of the primary power production/storage device used.
F		Gross Nameplate Rating (kVA)	This is the capacity value normally supplied by the manufacturer and stamped on the Generator’s “nameplate”. This value is not required where the manufacturer provides only a “kW” rating. However, where both kVA and kW values are available, please indicate both.
G		Gross Nameplate Rating (kW)	This is the capacity value normally supplied by the manufacturer and stamped on the Generator’s “nameplate”. This value is not required where the manufacturer provides only a “kVA” rating. However, where both kVA and kW values are available, please indicate both.
H		Net Nameplate Rating (kW)	This capacity value is determined by subtracting the “auxiliary” or “station service” loads used to operate the Generator or Generating Facility. Applicants are not required to supply this value but, if it is not supplied, applicable standby charges may be based on the higher “gross” values.
I		Operating Voltage	This value should be the voltage rating designated by the manufacturer and used in this Generating Facility. Please indicate phase-to-phase voltages for 3-phase installations. See SDG&E’s Rule 21, Section D.2.b. for additional information.
J		Power Factor Rating	This value should be the nominal power factor rating designated by the manufacturer for the Generator. See SDG&E’s Rule 21, Section D.2.i. for additional information.

Instructions for Part 4 Cont'd – Describing the Generators

	Generator Information	Instructions and Comments
K	PF Adjustment Range	Where the power factor of the Generator is adjustable, please indicate the maximum and minimum operating values. See SDG&E's Rule 21, Section D.2.i.
L	Wiring Configuration	Please indicate whether the Generator is a single-phase or three-phase device. See SDG&E's Rule 21, Section D.3.
M	3-Phase Winding Configuration	For three-phase generating units, please indicate the configuration of the Generator's windings or inverter systems.
N	Neutral Grounding	Wye connected generating units are often grounded – either through a resistor or directly, depending upon the nature of the electrical system to which the Generator is connected. If the grounding method used at this facility is not listed, please attach additional descriptive information.
O	<i>For Synchronous Generators Only:</i>	If the Generator is of a "synchronous" design, please provide the synchronous reactance, transient reactance, and subtransient reactance values supplied by the manufacturer. This information is necessary to determine the short circuit contribution of the Generator and as data in load flow and short circuit computer models of SDG&E's Distribution System. If the Generator's Gross Nameplate Capacity is 10 MW or greater, SDG&E may request additional data to better model the nature and behavior of the Generator with relation to its Distribution System.
P	<i>For Induction Generators Only:</i>	If the Generator is of an "induction" design, please provide the "locked rotor current" value supplied by the manufacturer. If this value is not available, the stator resistance, stator leakage reactance, rotor resistance, rotor leakage reactance values supplied by the manufacturer may be used to determine the locked rotor current. If the Generator's Gross Nameplate Capacity is 10 MW or greater, SDG&E may request additional data to better model the nature and behavior of the Generator with relation to its Distribution System.
Q	Short Circuit Current Produced by Generator	Please indicate the current each Generator can supply to a three-phase fault across its output terminals. For single phase Generators, please supply the phase-to-phase fault current.

Instructions for Part 4 Cont'd – Describing the Generators

	Generator Information	Instructions and Comments
R	<p><i>For Generators that are Started as a "Motor" Only:</i></p> <ol style="list-style-type: none"> 1. In-Rush Current 2. Host Customer's Service Entrance Panel (Main Panel) Continuous Current Rating 	<p>This information is needed only for Generators that are started by "motoring" the generator.</p> <p>See SDG&E's Rule 21, Section I.3.e. for significance and additional information.</p> <p>If this question was answered in Part 3, question C of this Application, it need not be answered here.</p>
S	Prime Mover Type	<p>Please indicate the type and fuel used as the "prime mover" or source of energy for the Generator.</p> <ol style="list-style-type: none"> 1 = Internal Combustion Engine – Natural Gas 2 = Internal Combustion Engine – Diesel Fueled 3 = Internal Combustion Engine - Other Fuel 4 = Microturbine– Natural Gas 5 = Microturbine – Other Fuel 6 = Combustion Turbine Natural Gas 7 = Combustion Turbine - Other Fuel 8 = Steam Turbine 9 = Photovoltaic Panels 10 = Solar-thermal engine 11 = Fuel Cell– Natural Gas 12 = Fuel Cell– Other Fuel 13 = Hydroelectric Turbine 14 = Wind Turbine 15 = Other (please describe)



San Diego Gas & Electric Company
San Diego, California

	<u>Revised</u>	Cal. P.U.C. Sheet No.	<u>17730-E</u>
Canceling	<u>Revised</u>	Cal. P.U.C. Sheet No.	<u>17717-E</u>

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Advice Ltr. No. 1656-E

Decision No. _____

Issued by
Lee Schavrien
Vice President
Regulatory Affairs

Date Filed Jan 24, 2005

Effective _____

Resolution No. _____

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San Diego Gas & Electric Company
San Diego, California

Revised Cal. P.U.C. Sheet No. 17731-E
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